PROJECTED WORKS.—Advertisements have been issued for tenders, by dates not specified, for building an inn at the Gretna station of the Caledonian Railway; and for constructing a sewer at Southampton.

A HORSE-POWER POCKET-BOILER.—At a recent meeting of the Academy of Sciences, at Paris, as already noticed by the *Literary Gazette*, M. Boutigny announced that M. Beauregard (a young engineer), had at length succeeded in forming a steam-engine, which was moved by the vapour or gases of water, generated on red hot plates, and known as water in the spheroidal state. The tremendous and explosive power of such vapour in a common boiler is but too well known; but it is doubtless quite possible to put even a power such as this—so dangerous when neither looked for nor wanted—into safety harness. From a mere globule or spheroid of water thus managed in a miniature boiler, an immense power is generated, which would appear to require decomposition of its elementary gases to explain; and if it be true that a drop of dew contains electric power enough to get up a good thunder-storm, a drop of water in a boiler like a snuff-box, may well yield the power of a single horse. It is a singular fact, too, that the drop or spheroid of water in such circumstances does not at once exhaust itself, or altogether evaporate in yielding such a power. It rolls about on the red hot surface, slowly yielding immensely elastic vapours or gases, and never rising in temperature itself beyond 190 degrees, and this we should think not so difficult to account for as may be imagined. The red heat or the salient electricity excited by the heat, is no doubt capable of decomposing a film of the water in contact with the surface, and this in its immense expansion absorbs, and for the moment exhausts, so great a quantity of the elastic salient forces that the remainder of the globule is kept, if not frozen, cool, and rolling about, till another film be expanded as before, with the like reactive cooling effect. The law of *constitutional or latent* heat and electricity, rightly understood, thus readily explains all. A 400-horse-power engine on this principle is about to be made in this country. It is stated by a correspondent of the *Times*, however, that some years since a British steamer was navigated to Lisbon and back with boilers acting on a like principle, but that to prevent "the immense oxidation of the plates" mercury was used between two series of them while the water was injected on the upper one; and the mercury escaped so as to injure the health of the stokers.

CAUTION TO BUILDERS.—In the course of an inquiry into the cause of a fire on premises, Clement's-court, Wood-street, Cheapside. Mr. Braidwood said, upon examining the place where the fire originated, he found that some workmen had lighted a fire on a hearthstone of a newly-erected fireplace, there being no stove fixed. He attributed the fire to the ignition of a timber shoring, which was only divided from the fireplace by about four inches of brickwork. Out of 700 fires occurring annually for the last twelve years, the great majority had been occasioned by the fact of timber existing in the brickwork of old buildings. He would suggest the necessity of builders boring the party walls of old buildings prior to constructing fireplaces, and then they would soon discover any of the old wood, well known to form a portion of the old houses in the city. The jury returned the following verdict:—"That the fire, which was accidental, originated in the ignition of certain portions of timber in an old party wall, against which had been recently erected a fireplace: and the jury recommend that, in addition to the usual precautions adopted in such constructions, builders should adopt the most stringent regulations in all such cases, for the better protection of life and property."

THE CHICHESTER COMPETITION.—"A Sufferer" (who forwards his address), says, I paid the carriage of my drawings down to Chichester. I have had them returned with one shilling to pay, no cord round the case, three of the drawings burst (though they were mounted on strainers), and not a line accompanying them either of thanks, apology, or even acknowledging in any way their ever having seen them!

IMPROVEMENTS IN MIDDLESEX HOSPITAL.—The improvements which have been going on here for some time past, mainly in consequence of the munificent bequest of Lady Murray, are now nearly completed. The ward windows are cleverly arranged to open so that the current of air is upwards. The sinks have been so altered that effluvium is carried away into the external air. The inconvenience of incrustation in boilers and pipes from hot water is sought to be avoided by carrying the steam from a boiler in the basement, after supplying the laboratory, vapour baths, surgeons' rooms, washhouse and laundry, &c., through a coil of iron pipe in a cold tank, which holds 1,000 gallons of water. The steam is there condensed, the earthy deposit takes place on the exterior of the heating surface, and by feeding the boiler with the condensed steam instead of fresh water, incrustation is prevented. The floors are covered with desiccated wood, and the walls with a non-absorbent plaster, to lessen the chance of propagating any epidemic. Messrs. Wyatt and Brandon are the architects engaged. If it be true as stated that 20,000*l.* have been spent in these improvements, the wisdom of the course adopted by the Government becomes questionable.

EGYPTIAN MONUMENTS.—At a meeting of the Syro-Egyptian Society, on the 12th December, the original drawings of Egyptian architectural remains, by Mr. Roberts, R.A., were arranged round the room in chronological order. Mr. Roberts pointed out the most interesting points connected with each sketch, and called attention to the evidences of the action of fire which were visible in many of the interiors. Messrs. Sharpe and Bonomi pointed out the architectural varieties of style observable in the works of the Greek and Roman periods, as compared with those of the Pharaohs; and commented on the remarkable fact, that both Greeks and Romans in Egypt adhered to the Egyptian style of architecture, and though well acquainted with the use of the arch, did not employ it in their constructions. Mr. Roberts having stated an opinion entertained by Professor Cockerell, that the palace of the Pharaohs had been erected upon the roofs of the temples—an opinion founded on the presence of holes in the roofs, apparently for receiving posts for the support of some superstructure, and of spouts for carrying off water from the roof, in a country where rain falls so unfrequently,—a discussion was raised upon that point. The view taken by Professor Cockerell was opposed by Mr. Scoles, Mr. Nash, and others; who considered that the holes in the roof, which are usually about 4 inches in diameter, were for the insertion of flag-staves, similar to those known from ancient Egyptian drawings to have been placed in front of the propylæa.—Mr. Johnston, however, observed that the Abyssinian sovereigns of the present day reside in tents, and that the holes in the roof alluded to might have supported canvas coverings.

SEA-SAND.—Speaking of the conversation at the last meeting of the Institute of Architects, and of those who thought that sea-sand, when well *blown*, might be used for mortar, the editor of the *Literary Gazette* says,—"*We* advise the use of any sand in preference to sea-sand, blown or unblown, for those who wish to have their apartments to continue unstained with picturesque drippings, or papered without tatters hanging grotesquely down. We had a cottage wall *between* the kitchen and dining-room fire-places, once built with sea-sand; but no fire nor heat could prevent its droppings!"

ENGRAVED PORTRAITS.—Mr. G. R. Ward, whose portraits in mezzotint we have had occasion to mention before, has recently completed two others—Mr. George Hudson, M.P., after a painting by F. Grant, R.A., and Mr. W. Astell, M.P., late Chairman of the East-India Company, from a painting by Mr. F. R. Say. These are good specimens of Mr. Ward's skill in his art, the head of Mr. Astell in particular, which is luminous and life-like. The accessories in the full length of Mr. Hudson are better than the figure. The right hand of the honourable member wants a little more work on it. It is at present a blot. A portrait of Mr. Maunder, engraved by Mr. E. Finden from a picture by Mr. Waugh, is the representation of a laborious, clear-headed, and painstaking writer, to whom the rising generation are much indebted.

AN ARCHITECT'S CARD.—Sir: As the enclosed is a bit of a curiosity in its way, it may prove amusing to your readers. I assure you geniuses of this grade are by no means uncommon, which, taking into consideration the extent of talent required to master five or six professions and trades, is rather surprising: still this is the first instance I have ever witnessed of one of these universal architectural geniuses having had the boldness to publish such a card as this:—"——, Land Surveyor, Architect, Builder, Deal and Timber Merchant, &c. &c. &c., M——. Parishes, estates, manors, and townships, surveyed and mapped, maps and plans of estates, buildings, &c., drawn, or copies of the same to any scale required. Levelling for railways, drainage, &c. Designs for cottages, villas, farm-houses and outbuildings. Also specifications and estimates prepared with accuracy and dispatch. —— begs to inform the trade and the building public in general, that he intends to manufacture sashes, frames, shop fronts, doors, and all other kind of joiner's work, on the lowest possible scale of prices. A price for any of the above may be had on application. An assortment of deals, timber, &c., always on hand, also cut stuff, on the lowest possible terms for cash. Roman Cement—being connected with, &c. &c. Enamelled Slate—this beautiful material has been introduced &c. &c. &c. &c."—"S.," Fleetwood.

HEALTH ACT IN UXBRIDGE.—On Monday, December 18, Mr. Ranger, one of the inspectors appointed by the General Board of Health, opened a court of inquiry at Uxbridge. A number of witnesses gave testimony of the necessity for the introduction of sanitary measures. The commissioner, attended by Mr. W. Rayner, surgeon, and several others, made a personal inspection of most of the localities. According to our informant, many of the courts were found very deficient in drainage. Gas is supplied to the public at 10*s.* per 1,000 feet by a company who promised a great reduction, but who have not yet made it.—The south side of the church has lately been rebuilt, with flint and Bath-stone dressings, under the direction of Mr. C. J. Shoppee, architect.

THE PHILHARMONIC CONCERT-HALL, LIVERPOOL.—With reference to a letter dated from Liverpool, and signed "John Cunningham," on which we commented in a recent article, we have received another communication from Liverpool, also signed "John Cunningham," stating that the first letter was written by one of his "*good friends*" there, and requesting us to insert his "flat denial of its authorship." We are obliged to take for granted that the second letter is correct, and the first not, although upon the face of them there is nothing to make us doubt one more than the other. We sincerely hope that Mr. Cunningham has not many such "good friends;" and that he will succeed in punishing the author of what would seem to be nothing less than a forgery.

BUILDERS' BENEVOLENT INSTITUTION.—The arrangements for the ball in aid of the funds of this institution, which, as already mentioned, is to take place on the 9th, are progressing satisfactorily. Lord Dudley Stuart has promised to attend if in town, a good band has been engaged, and 300 out of the 400 tickets are already disposed of.

THE PEDESTAL TO THE STATUE OF CHARLES I. AT CHARING CROSS.—"A Subscriber" writes,—I think it is much to be regretted that some effectual step is not taken to restore the beautiful pedestal of Charles the First's statue at Charing Cross, before the ornaments and mouldings have entirely perished, to preclude the possibility of tracing either the one or the other.

MEETINGS OF SCIENTIFIC BODIES

Held during the ensuing week.

MONDAY, JAN. 8.—Institute of British Architects, 8 P.M. (Paper on Caen Stone).

TUESDAY, 9.—Institution of Civil Engineers, 8 P.M. (Opening meeting).

WEDNESDAY, 10.—Graphic Society, 8 P.M.

THURSDAY, 11.—Royal Society, 8½ P.M.; Society of Antiquaries, 8 P.M.

FRIDAY, 12.—Archæological Association, 8½ P.M.

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